REMARKS

In the non-final Office Action, the Examiner rejects claims 1-3, 5, 7, 8, 10, 11, 14, 16, 17, 23, and 25 under 35 U.S.C. § 102(e) as anticipated by AWEYA et al. (U.S. Patent No. 6,961,307); objects to claims 4, 6, 9, 12, 13, 15, 24 as dependent upon a rejected base claim; and allows claims 18-22. Applicants appreciate the indication that claims 4, 6, 9, 12, 13, 15, 24 would be allowable if rewritten to include the limitations of the base claim and any intervening claim and the indication that claims 18-22 are allowed, but traverse the 35 U.S.C. § 102(e) rejection.[1] Claims 1-25 remain pending.

Claims 1-3, 5, 7, 8, 10, 11, 14, 16, 17, 23, and 25 stand rejected under 35 U.S.C. § 102(e) as allegedly anticipated by AWEYA et al. Applicants traverse this rejection.

A proper rejection under 35 U.S.C. § 102 requires that a reference teach every aspect of the claimed invention. Any feature not directly taught must be inherently present. See M.P.E.P. § 2131. AWEYA et al. does not disclose or suggest the combination of features in Applicants' claims 1-3, 5, 7, 8, 10, 11, 14, 16, 17, 23, and 25.

For example, independent claim 1 recites a system for providing congestion control. The system includes a buffer memory configured to temporarily store data in a plurality of queues; and a processor configured to: measure a total amount of memory occupied by the plurality of queues in the buffer memory, modify lengths of the plurality of queues based on the total amount of memory occupied, and modify drop profiles

[1] As Applicants' remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicants' silence as to assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine reference, assertions as to dependent claims, etc.) is not a concession by Applicants that such assertions are accurate or such requirements have been met, and Applicants reserve the right to analyze and dispute such assertions/requirements in the future.

associated with the plurality of queues based on the total amount of memory occupied. AWEYA et al. does not disclose or suggest this combination of features.

For example, AWEYA et al. does not disclose or suggest a processor configured to modify lengths of a plurality of queues based on a total amount of memory occupied by the plurality of queues in a buffer memory. The Examiner relies on column 5, lines 63-65 and column 6, line 67 – column 7, line 2 of AWEYA et al. as allegedly disclosing this feature (Office Action, pg. 3). Applicants respectfully disagree with the Examiner's interpretation of AWEYA et al.

At column 5, lines 63-65, AWEYA et al. discloses that a drop decision module and a packet drop controller receive periodic updates from a data buffer about an aggregate load or queue size. Nowhere in this section, or elsewhere, does AWEYA et al. disclose or suggest a processor configured to modify lengths of a plurality of queues based on a total amount of memory occupied by the plurality of queues in a buffer memory, as required by claim 1. Instead, AWEYA et al. is merely concerted with determining a queue size or aggregate load in a data buffer (column 6, lines 66-67).

At column 6, line 67 – column 7, line 2, AWEYA et al. discloses that the drop decision module and the packet drop controller must periodically receive updated load information about the queue size or aggregate load in the data buffer. Nowhere in this section, or elsewhere, does AWEYA et al. disclose or suggest a processor configured to modify lengths of a plurality of queues based on a total amount of memory occupied by the plurality of queues in a buffer memory, as required by claim 1. Instead, AWEYA et al. is merely concerted with determining a queue size or aggregate load in a data buffer

(column 6, lines 66-67).For at least the foregoing reasons, Applicants submit that claim 1 is not anticipated by AWEYA et al.

Claims 2, 3, 5, 7, and 8 depend from claim 1. Therefore, claims 2, 3, 5, 7, and 8 are not anticipated by AWEYA et al. for at least the reasons given above with respect to claim 1.

Independent claim 10 recites a device that includes a buffer memory configured to temporarily store data in a plurality of queues; and a processor configured to: measure a fullness of the buffer memory, assign sizes to the plurality of queues based on the fullness of the buffer memory, and adjust thresholds of drop profiles associated with the plurality of queues based on the sizes assigned to the plurality of queues. AWEYA et al. does not disclose or suggest this combination of features.

For example, AWEYA et al. does not disclose or suggest a processor configured to adjust thresholds of drop profiles associated with a plurality of queues based on sizes assigned to the plurality of queues. The Examiner relies on column 5, line 63 – column 6, line 5 and column 9, line 49 – column 10, line 8 of AWEYA et al. as allegedly disclosing this feature (Office Action, pg. 5). Applicants respectfully disagree with the Examiner's interpretation of AWEYA et al.

At column 5, line 63 – column 6, line 5, AWEYA et al. discloses:

> The drop decision module 40 and the packet drop controller 30 receive periodic updates from the data buffer 20 regarding the aggregate load or queue size (q). Based on a queue control law which includes target parameters selected by a network operator, the packet drop controller 30 determines a packet drop probability p_d which can be used to drop packets to provide feedback to the data sources to throttle their transmission rates. Finally, the packet drop controller 30 sends the desired drop probability per class to the drop decision module 40.

This section of AWEYA et al. discloses determining a packet drop profile based on target parameters selected by a network operator. The packet drop probability can be used to

drop packets to provide feedback to data sources to throttle their transmission rates. This section of AWEYA et al. discloses determining a packet drop profile, not adjusting thresholds of drop profiles based on sizes of queues. Therefore, this section of AWEYA et al. does not disclose or suggest a processor configured to adjust thresholds of drop profiles associated with a plurality of queues based on sizes assigned to the plurality of queues, as required by claim 10.

At column 9, line 49 – column 10, line 9, AWEYA et al. discloses computations of packet drop probability and target loss probabilities. This section of AWEYA et al. has nothing to do with adjusting thresholds of drop profiles based on sizes of queues. Therefore, this section of AWEYA et al. does not disclose or suggest a processor configured to adjust thresholds of drop profiles associated with a plurality of queues based on sizes assigned to the plurality of queues, as required by claim 10.

For at least the foregoing reasons, Applicants submit that claim 10 is not anticipated by AWEYA et al.

Claims 11, 14, 16, and 17 depend from claim 10. Therefore, claims 11, 14, 16, and 17 are not anticipated by AWEYA et al. for at least the reasons given above with respect to claim 10.

Independent claim 23 recites a method for providing congestion control for data stored in queues. The method includes dynamically changing oversubscription of the queues based on total usage of a memory that contains the queues to set new lengths for the queues; and performing random early detection on the queues based on the new lengths. AWEYA et al. does not disclose or suggest this combination of features.

For example, AWEYA et al. does not disclose or suggest dynamically changing oversubscription of queues based on total usage of a memory that contains the queues to set new lengths for the queues. The Examiner relies on column 5, lines 63-65 and column 6, line 67 – column 7, line 2 of AWEYA et al. as allegedly disclosing this feature (Office Action, pg. 6). Applicants respectfully disagree with the Examiner's interpretation of AWEYA et al.

As noted above, at column 5, lines 63-65, AWEYA et al. discloses that a drop decision module and a packet drop controller receive periodic updates from a data buffer about an aggregate load or queue size. This section of AWEYA et al. has nothing to do with oversubscription. This section of AWEYA et al. also does not mention setting new lengths for queues based on total usage of memory. Therefore, this section of AWEYA et al. does not disclose or suggest dynamically changing oversubscription of queues based on total usage of a memory that contains the queues to set new lengths for the queues, as required by claim 23.

As noted above, at column 6, line 67 – column 7, line 2, AWEYA et al. discloses that the drop decision module and the packet drop controller must periodically receive updated load information about the queue size or aggregate load in the data buffer. This section of AWEYA et al. has nothing to do with oversubscription. This section of AWEYA et al. also does not mention setting new lengths for queues based on total usage of memory. Therefore, this section of AWEYA et al. does not disclose or suggest dynamically changing oversubscription of queues based on total usage of a memory that contains the queues to set new lengths for the queues, as required by claim 23.

For at least the foregoing reasons, Applicants submit that claim 23 is not anticipated by AWEYA et al.

Independent claim 25 recites a system for providing congestion control for data stored in queues. The system includes means for measuring memory usage; means for updating a length of a queue based on the measured memory usage; means for updating minimum and maximum thresholds of a drop profile associated with the queue based on the updated length of the queue; and means for selectively dropping data from the queue based on the updated minimum and maximum thresholds of the drop data profile associated with the queue. AWEYA et al. does not disclose or suggest this combination of features.

For example, AWEYA et al. does not disclose or suggest means for updating a length of a queue based on the measured memory usage. The Examiner relies on column 5, lines 63-65 and column 6, line 66 – column 7, line 2 of AWEYA et al. as allegedly disclosing this feature (Office Action, pg. 6). Applicants respectfully disagree with the Examiner's interpretation of AWEYA et al.

As noted above, at column 5, lines 63-65, AWEYA et al. discloses that a drop decision module and a packet drop controller receive periodic updates from a data buffer about an aggregate load or queue size. This section of AWEYA et al. does not mention updating lengths of queues based on memory usage. Therefore, this section of AWEYA et al. does not disclose or suggest means for updating a length of a queue based on the measure memory usage, as required by claim 25.

As noted above, at column 6, line 66 – column 7, line 2, AWEYA et al. discloses that the drop decision module and the packet drop controller must periodically receive

updated load information about the queue size or aggregate load in the data buffer. This section of AWEYA et al. does not mention updating lengths of queues based on memory usage. Therefore, this section of AWEYA et al. does not disclose or suggest means for updating a length of a queue based on the measure memory usage, as required by claim 25.

AWEYA et al. further does not disclose or suggest means for updating minimum and maximum thresholds of a drop profile associated with the queue based on the updated length of the queue. The Examiner relies on column 5, lines 50-52 and column 9, line 49 – column 10, line 8 of AWEYA et al. as allegedly disclosing this feature (Office Action, pg. 6). Applicants respectfully disagree with the Examiner's interpretation of AWEYA et al.

At column 5, lines 50-52, AWEYA et al. discloses setting an average buffer utilization level and average queuing delay, since the average queue size revolves about this value. This section of AWEYA et al. disclosing setting average buffer utilization and queuing delay values, not updating thresholds of a drop profile. Therefore, this section of AWEYA et al. does not disclose or suggest means for updating minimum and maximum thresholds of a drop profile associated with the queue based on the updated length of the queue, as required by claim 25.

As noted above, at column 9, line 49 – column 10, line 8, AWEYA et al. discloses computations of packet drop probability and target loss probabilities. This section of AWEYA et al. does not disclose or suggest updating thresholds of a drop profile. Therefore, this section of AWEYA et al. does not disclose or suggest means for updating

minimum and maximum thresholds of a drop profile associated with the queue based on the updated length of the queue, as required by claim 25.

For at least the foregoing reasons, Applicants submit that claim 25 is not anticipated by AWEYA et al.

In view of the foregoing remarks, Applicants respectfully requests the Examiner's reconsideration of this application, and the timely allowance of the pending claims.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

HARRITY SNYDER, L.L.P.

By: /Meagan S. Walling/
Meagan S. Walling
Registration No. 60,112

Date: July 13, 2007

11350 Random Hills Road
Suite 600
Fairfax, Virginia 22030
(571) 432-0800

Customer Number: 44987